CLAIMS

[1] A program execution device which downloads a program and activates the program, said device comprising:

a download time measurement unit operable to measure a download time of the program;

an activation time measurement unit operable to measure an activation time of the program;

a history information memory unit operable to store, on a program-by-program basis, the measured download time and activation time as a part of history information;

an activation management unit operable to receive an activation instruction for activating the program;

a history information search unit operable to search out history information of the program for which the activation instruction has been received; and

a notification unit operable to predict an activation waiting time based on the history information searched out by said history information search unit and notify a user of the predicted activation waiting time, the activation waiting time being a time from the reception of the activation instruction to an actual activation of the activation instruction.

[2] The program execution device according to Claim 1,

wherein said notification unit is operable to predict the activation waiting time which is a time obtained by adding the download time to the activation time included in the history information searched out by said history information search unit.

[3] The program execution device according to Claim 1, further comprising

a holding unit operable to hold the downloaded program,

wherein said notification unit is operable to predict, as the activation waiting time, a time obtained by adding the download time to the activation time included in the history information searched out by said history information search unit, in the case where the program for which the activation instruction has been received is not held in said holding unit, and is operable to predict, as the activation waiting time, the activation time included in the history information searched out by said history information search unit, in the case where the program for which the activation instruction has been received is held in said holding unit.

[4]   The program execution device according to Claim 3, further comprising

an authentication unit operable to authenticate the program depending on whether or not the program is held in said holding unit,

wherein said download time measurement unit is operable to measure the download time including an authentication time required for said authentication unit to authenticate the program, in the case where the program for which the activation instruction has been received is not held in said holding unit, and is operable to measure the activation time including the authentication time required for said authentication unit to authenticate the program, in the case where the program for which the activation instruction has been received is held in said holding unit.

[5]   The program execution device according to Claim 4, further comprising

an authentication judgment unit operable to judge whether or not the program needs to be authenticated by said authentication unit,

wherein said authentication unit is operable to authenticate

the program in the case where said authentication unit has judged that the program needs to be authenticated.

[6]   The program execution device according to Claim 1, further comprising

a history information update unit operable to update the history information stored in said history information memory unit using (a) the newly measured activation time or (b) the download time and activation time.

[7]   The program execution device according to Claim 1,

wherein said notification unit is operable to notify the user of a program name of the program in addition to the activation waiting time.

[8]   The program execution device according to Claim 1,

wherein said notification unit is operable to notify the activation waiting time using a countdown.

[9]   The program execution device according to Claim 1,

wherein said notification unit is operable to predict that the activation waiting time is unknown, in the case where the history information of the program for which the activation instruction has been received cannot be obtained, as a result of the search performed by said history information search unit.

[10]   A program execution method for downloading a program and activates the program, said method comprising:

a download time measurement step of measuring a download time of the program;

an activation time measurement step of measuring an activation time of the program;

a history information memory step of storing, on a program-by-program basis, the measured download time and activation time as a part of history information;

an activation management step of receiving an activation instruction for activating the program;

a history information search step of searching out history information of the program for which the activation instruction has been received; and

a notification step of predicting an activation waiting time based on the history information searched out in said history information search step and notifying a user of the predicted activation waiting time, the activation waiting time being a time from the reception of the activation instruction to an actual activation of the activation instruction.

[11] A program intended for downloading an execution program and activating the execution program, said program causing a computer to execute:

a download time measurement step of measuring a download time of the program;

an activation time measurement step of measuring an activation time of the program;

a history information memory step of storing, on a program-by-program basis, the measured download time and activation time as a part of history information;

an activation management step of receiving an activation instruction for activating the program;

a history information search step of searching out history information of the program for which the activation instruction has been received; and

a notification step of predicting an activation waiting time based on the history information searched out in said history

information search step and notifying a user of the predicted activation waiting time, the activation waiting time being a time from the reception of the activation instruction to an actual activation of the activation instruction.

5

[12] A recording medium on which a program is stored, the program being intended for downloading an execution program and activating the execution program so as to cause a computer to execute:

10   a download time measurement step of measuring a download time of the program;

        an activation time measurement step of measuring an activation time of the program;

        a history information memory step of storing, on a

15 program-by-program basis, the measured download time and activation time as a part of history information;

        an activation management step of receiving an activation instruction for activating the program;

        a history information search step of searching out history

20 information of the program for which the activation instruction has been received; and

        a notification step of predicting an activation waiting time based on the history information searched out in said history information search step and notifying a user of the predicted

25 activation waiting time, the activation waiting time being a time from the reception of the activation instruction to an actual activation of the activation instruction.